

## REMARKS

Claims 1-27 pending in the application. Claims 1-27 stand rejected.

Claims 1, 10, 15, 16, 20, 22, 24 and 26 have been amended in this Response. No claims have been added. No new matter has been added. Applicant respectfully requests reconsideration of the pending claims in light of the following remarks.

### A. Rejections of Claims 1,10, 16, 20, 22-24 and 26 Under 35 U.S.C. § 103

In the Office Action dated June 10, 2005, the Examiner rejected Claims 1, 10, 16, 20, 22-24 and 26 under 35 U.S.C. § 103(a) as being unpatentable over Huang, et al. (U.S. Patent No 6,151,582) (HU), in view of Rumbaugh, et al. (Object oriented modeling and Design, 1991) (RU). (June 10, 2005 Office Action, page 3.) Applicant respectfully submits this rejection is traversed.

The Examiner states that HU teaches “a simulation system used by an operator and including a source of input data, a display, and a simulator adapted to be executed by a processor and generating a set of simulation results during the execution in response to the input data..., an organizing and managing system..., one or more of the sets and supersets of test data..., editing means..., and the simulator generating a set of simulation results...” (June 10, 2005 Office Action, page 3.) The Examiner further states that HU “teaches a case manager adapted for storing a plurality of sets and supersets of test data files, the sets and supersets of test data files being stored in the case manager in the form of a tree like structure.” (June 10, 2005 Office Action, page 4.) The Examiner acknowledges, however, that “Huang et al does not expressly teach the sets and supersets of test data files being stored in the case manager in the form of a

hierarchical non-conventional tree like structure having a root and one or more leaves, the tree like structure being non-conventional in that one or more of the supersets underlie corresponding ones of the sets in the tree-like structure, such that one or more of the sets is situated between the root and the corresponding superset.” (June 10, 2005 Office Action, page 4.)

The Examiner asserts that "**Rumbaugh et al [RU]** teaches the sets and supersets of test data files being stored in the case manager in the form of a hierarchical non-conventional tree like structure having a root and one or more leaves, the tree like structure being non-conventional in that one or more of the supersets underlie corresponding ones of the sets in the tree-like structure, such that one or more of the sets is situated between the root and the corresponding superset..." (June 10, 2005 Office Action, page 4.) Applicant agrees that **RU** teaches the sets and supersets of test data files being stored in the form of a hierarchical tree like structure having a root and one or more leaves, but respectfully disagrees with Examiner's assertion that the tree like structure of **RU** is non-conventional and respectfully disagrees with Examiner's assertion that **RU** teaches that one or more of the supersets underlie corresponding ones of the sets in the tree-like structure, such that one or more of the sets is situated between the root and the corresponding superset..."

The Examiner further asserts that **RU** "depicts a subclass below its corresponding class, the subclass can derive information from higher class as shown in Figure 3.23; therefore the subclass contains more information than the class or superclass (having less data) above it..." Similarly, in the section entitled "Response to Arguments," on page 33 of the June 10, 2005 Office Action, the Examiner states "that while **Rumbaugh et al**

depicts a subclass below its corresponding class, the subclass can derive information from higher class as shown in Figure 3.23. Therefore, the subclass contains more information than the class or super class above it, the subclass forms a superset (having more data) of the class or superclass (having less data above it), while the class or superclass forms a set. As one goes down the class structure, more and more data is available to the lower classes, thus they form[] supersets of the classes or superclasses (sets) above them. There is also no constraint in the database to the amount of data in various sets and supersets and the type of data in the sets or supersets."

Applicant respectfully submits that the Examiner's arguments contradict the definitions given in the **RU** reference. The classification of subclass and superclass, both in **RU** and in the instant application, does not depend on whether one class has information not contained in the other class, but on the relationship between the two classes, that is whether one class refines the other and inherits the other's features. The independent claims of the instant application have been amended to clarify this relationship.

### **1. The Definitions of Subclass and Superclass in the RU Reference Depend on Their Relationship.**

The RU reference defines "superclass" and "subclass" on page 39, first full paragraph (underlined emphasis added):

"*Generalization* is the relationship between a class and one or more refined versions of it. The class being refined is called the superclass and each refined version is called a sub class. For example, *Equipment* is the superclass of *Pump* and *Tank*. Attributes and operations common to a group of subclasses are attached to the superclass and shared by each subclass. Each

subclass is said to inherit the features of its superclass. For example, *Pump* inherits attributes manufacturer, weight and cost from *Equipment*."

Nevertheless, subclasses may contain more information than in the super class from which they derive, without changing their status as subclasses. As RU states, "Each subclass not only inherits all the features or its ancestors but adds its own specific attributes and operations as well. For example, *Pump* adds attribute *flow rate*, which is not shared by other kinds of *Equipment*." (RU, page 39, lines 16-18, underlined emphasis added.)

This does not, however, change *Pump's* relationship with *Equipment*: *Pump* refines *Equipment* (a pump is a type of equipment but the reverse is not true) and inherits attributes from *Equipment*, while *Equipment* does not inherit attributes from *Pump*. Therefore, according to RU's own definitions of subclass and superclass, while *Pump* is a subclass of *Equipment*, it cannot be a superclass of *Equipment*.

## **2. The RU Reference Does Not Meet the Limitations of Instant Claim 1.**

The instant application's use of the words "sets" and "supersets" is in accord with the RU reference's definitions of "subclass" and "superclass," as described above. Claim 1 has been amended to recite, in part:

"a case manager adapted for storing a plurality of sets and supersets of test data files, wherein each superset has a parent relationship with each of its child sets, said sets and supersets of test data files being stored in said case manager in the form of a hierarchical, non-conventional tree like structure, having a root and one or more leaves, the tree like structure being non-conventional in that one or more of said supersets underlie corresponding ones

of said sets in said tree like structure, such that one or more of said sets is situated between the root and the corresponding superset."

No new matter was added. Support for this amendment can be found, for example, in paragraph [0168] of the substituted Specification at page 48, which recites:

"[0168] Nomenclature

1. Base - first simulator run of the current project
2. Case - any subsequent simulator run where the grid geometry has been changed from its parent
3. Scenario - any subsequent simulator run where the grid geometry remains the same as its parent"

(Emphasis added.) Likewise, paragraph [0172] of the Substituted Specification at page 49 recites:

"[0172] Case

1. About - panel to show/enter case details
2. View - views input and output files associated with selected case/scenario
3. Load - loads selected case/scenario
4. Load As - loads selected case/scenario as a new case/scenario
5. Create - creates a new case/scenario from an existing simulator run
6. Delete - removes selected case/scenario and all children from project"

(Emphasis added.)

Fig. 3.23 of RU depicts a conventional hierarchical tree like structure having a root and one or more leaves, but does not depict "the tree like structure being non-conventional in that one or more of said supersets underlie corresponding ones of said sets in said tree like structure, such that one or more of said sets is situated between the root and the corresponding superset..." and "wherein each superset has a parent relationship with each of its child sets..." The subclasses shown in Fig. 3.23 of the RU reference do not have a parent relationship with their own superclasses (they have a children of their superclasses) and thus cannot be superclasses of their own superclasses,

no matter how much information is contained in the each subclass. The relationship between subclass and its superclass does not change and inheritance (from superclass to subclass only and not the other way around) remains the same. Because the subclasses of the RU reference are not refined by their own superclasses and because only superclasses have "parent relationships" with their subclasses (and not the reverse), the subclasses of RU cannot become superclasses of their own superclasses, as suggested by the Examiner, according to RU's own definitions. Therefore, RU does not have "one or more of said sets is situated between the root and the corresponding superset" and the RU reference does not meet the limitations of instant claim 1.

**3. Like Claim 1, Claims 10, 16, 20, 22, 23, 24, and 26 Are Patentably Distinct from the Cited References.**

Like claim 1, claims 10, 15, 16, 20, 22, 24 and 26 have been previously amended to recite that the "each superset has a parent relationship with each of its child sets..." and had been previously amended to recite the "hierarchical, non-conventional tree like structure, having a root and one or more leaves, the tree like structure being non-conventional in that said supersets underlying corresponding ones of said sets in said tree like structure, such that one or more of said sets is situated between the root and the corresponding superset..." As with the amendment to claim 1, no new matter has been added. Accordingly, claims 10, 16, 20, 22, 24, and 26 are thus felt to be likewise patentably distinct over the combination of HU and RU.

Claim 23 depends from claim 22 and contains all of its limitations as amended. Accordingly, Applicant respectfully submits that this rejection has also been traversed with respect to claim 23.

Accordingly, Applicant respectfully submits that this rejection has been traversed and requests reconsideration and allowance of claims 1, 10, 16, 20, 22, 23, 24 and 26.

**B. Rejection of Dependent Claims 2-9, 11-14, 17-19, 21, 25 and 27 Under 35 U.S.C. § 103**

In the Office Action dated February 14, 2005, the Examiner rejected Claims 2-9, 11-14, 17-19, 21, 25 and 27 under 35 U.S.C. § 103(a) as being unpatentable over Huang, et al., (U.S. Patent No. 6,151,582) (**HU**), in view of Rumbaugh, et al. (Object oriented modeling and Design, 1991) (**RU**), and further in view of Cowgill (U.S. Patent No. 5,835,566) (**CO**).

Applicant respectfully submits that these claims all depend from independent claims described in Section A above and contain all of the limitations of the independent claims, as amended, from which they depend. For the reasons described in Section A, **HU** and **BH** do not render those independent claims obvious and the addition of **CO** does not supply the deficiencies of that combination. Accordingly, Applicant respectfully submits that this rejection has also been traversed with respect to dependent claims 2, 9, 11-14, 17-19, 21, 25 and 27 and asks for reconsideration and allowance of those claims as well.

**C. Rejection of Claim 15 Under 35 U.S.C. § 103**

In the Office Action dated February 14, 2005, the Examiner rejected Claim 15 under 35 U.S.C. § 103(a) as being unpatentable over Huang, et al., (U.S. Patent No. 6,151,582) (**HU**), in view of Rumbaugh, et al. (Object oriented modeling and Design, 1991) (**RU**), and further in view of Cowgill (U.S. Patent No. 5,835,566) (**CO**) and further

in view of Gunsekara (U.S. Patent No. 6,018,497) (**GU**). Like the claims discussed in section A herein, Claim 15 as amended recites in part:

“wherein each superset has a parent relationship with each of its child sets, said plurality of sets and plurality of supersets being organized in a hierarchical, non-conventional tree-like structure, having a root and one or more leaves, the tree like structure being non-conventional in that some of said case scenarios being supersets of other of said case scenarios in the tree-like structure with said supersets underlying corresponding ones of said sets in said tree like structure, such that one or more of said sets is situated between the root and the corresponding superset,...”

(Emphasis added.) As with the amendment to claim 1, no new matter has been added. For the reasons described above in Section A, a combination of **HU** and **BH** does not disclose or suggest such a flexible, hierarchical, structure and the addition of **CO** and **GU** does not supply the deficiencies of that combination. Accordingly, Applicant respectfully submits that this rejection has also been traversed with respect to claim 15 and asks for reconsideration and allowance of claim 15 as well.

#### **INVITATION FOR DISCUSSION**

If however, the Examiner feels that it might be helpful, Applicant could arrange a telephone interview conference call, including the inventor, who lives in the United Kingdom. Applicant respectfully requests the Examiner contact Applicant if he feels such an interview would be helpful.

#### **CONCLUSION**

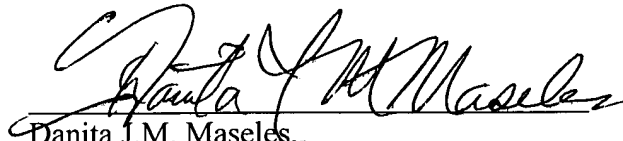
It is respectfully submitted that the claims of this application is in condition for allowance for the reasons stated above. Therefore, it is requested that the Examiner



reconsider each and every rejection as applicable to the claims now pending in the application and pass such claims to issue.

This response is intended to be a complete response to the Office Action dated June 10, 2005.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Danita J.M. Maseles", written over a horizontal line.

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